

Applied A.I. Solutions

Data Visualization Techniques

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DATA VISUALIZATION TECHNIQUES

Storytelling & Case Study

Data storytelling

Data storytelling is a structured approach for communicating data insights, and it involves a combination of three key elements: ¹

1. Data (explore)
2. Visuals (assessment and selection)
3. Narrative (explain)

It is an essential Data Science skill everyone needs.

¹ Brent Dykes, Contributor, Forbes

Data storytelling

"The ability to take data, to be able to understand it, to process it, to extract value from it, to visualize it, to communicate it's going to be a hugely important skill in the next decades."

Google's Chief Economist Dr. Hal R Varian

A **compelling storytelling** helps to improve the communication of compelling insights and enrich insight-to-value conversion rate, and thus **promote and instill a call-to-action and change.**

¹ Brent Dykes, Contributor, Forbes

Data storytelling Best Practices

1. Data exploration

- Understand the context

2. Focus attention

- Appropriate visual (human-friendly type chart)
- Strategic use of colours (Marketing psychology)
- Minimalist design
- Clutter identification and removal

Best practices

Data storytelling Best Practices – cont'd

3. Data explanation

- Tell a story
 - Craft narrative
 - Plot: define the essential context
 - Twists: what is interesting about the data and what it shows
 - Call to actions (embedded)
 - Ending: Define clear key takeaways, what do you want your audience to do next (decision-making, reporting, performance)

Storytelling Best Practices

- MUST have a pre-defined goal to achieve
- MUST have a clear message to deliver to your audience
- MUST be tailored to your target audience
- MUST include:
 - Introduction (first page)
 - Development (3-5 pages)
 - Conclusion (last page):
 - a. Findings
 - b. Recommendations
 - c. Call-to-action
- 5-7 page long
- 1 dashboard or worksheet per page
- 2-3 objects (text tables and charts) per dashboard
- Smart use of parameters, calculated fields and filters
- Smart use of format, colours, size, display

Get Ready

- Rehearse
- Get feedback
- Fix
- Deliver

Advice

When you tell a story, you have **ONLY** one opportunity so make it count!

Tableau Business Intelligence Software

Case Study

- **Business Analysis**
- **Storytelling**
- **Decision-making**



Cole Nussbaumer Knaflitz
Storytelling with Data: A Data Visualization
Guide for Business Professionals

<https://youtu.be/8EMW7io4rSI?start=1295>

Watch from 4:30-minute to 28-minute marks

Tableau Business Intelligence Software Case Study

Forecasting

Tableau Business Intelligence Software Case study

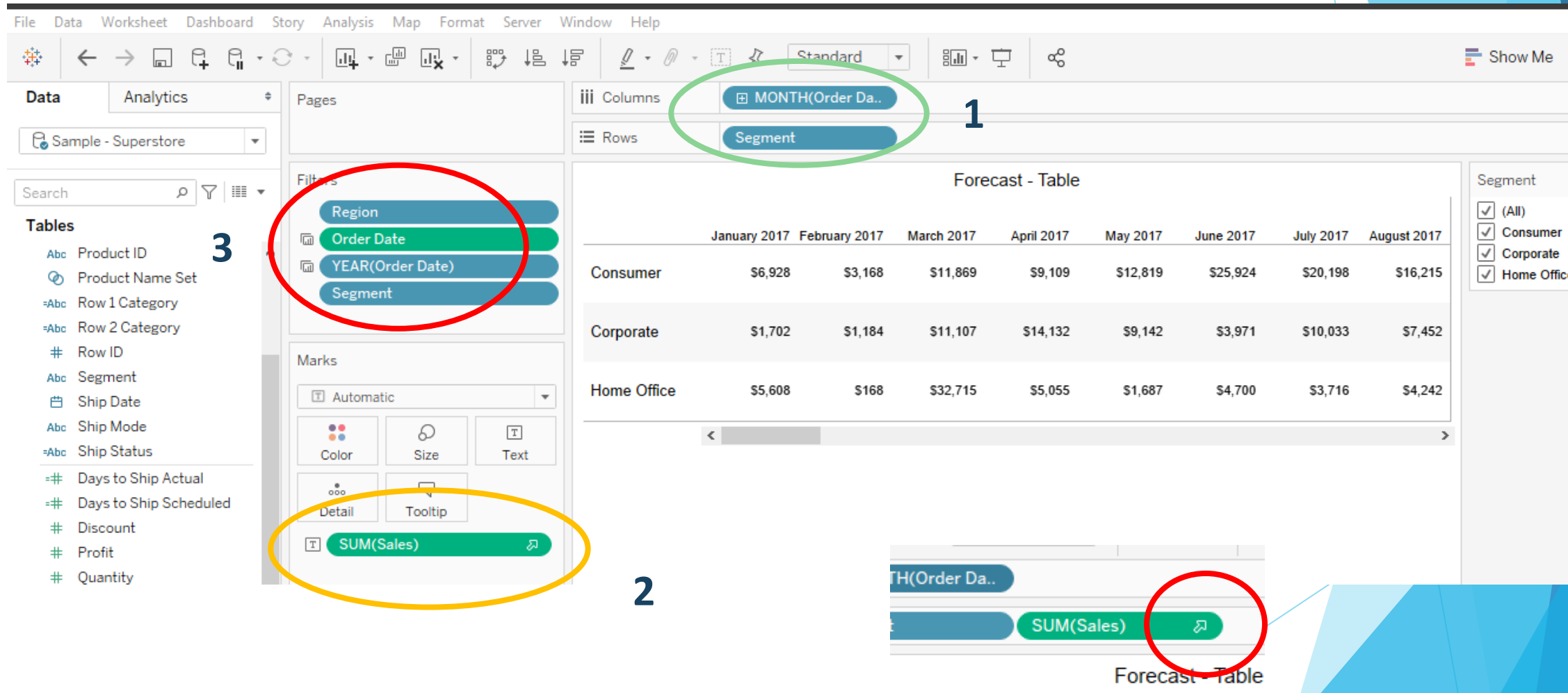
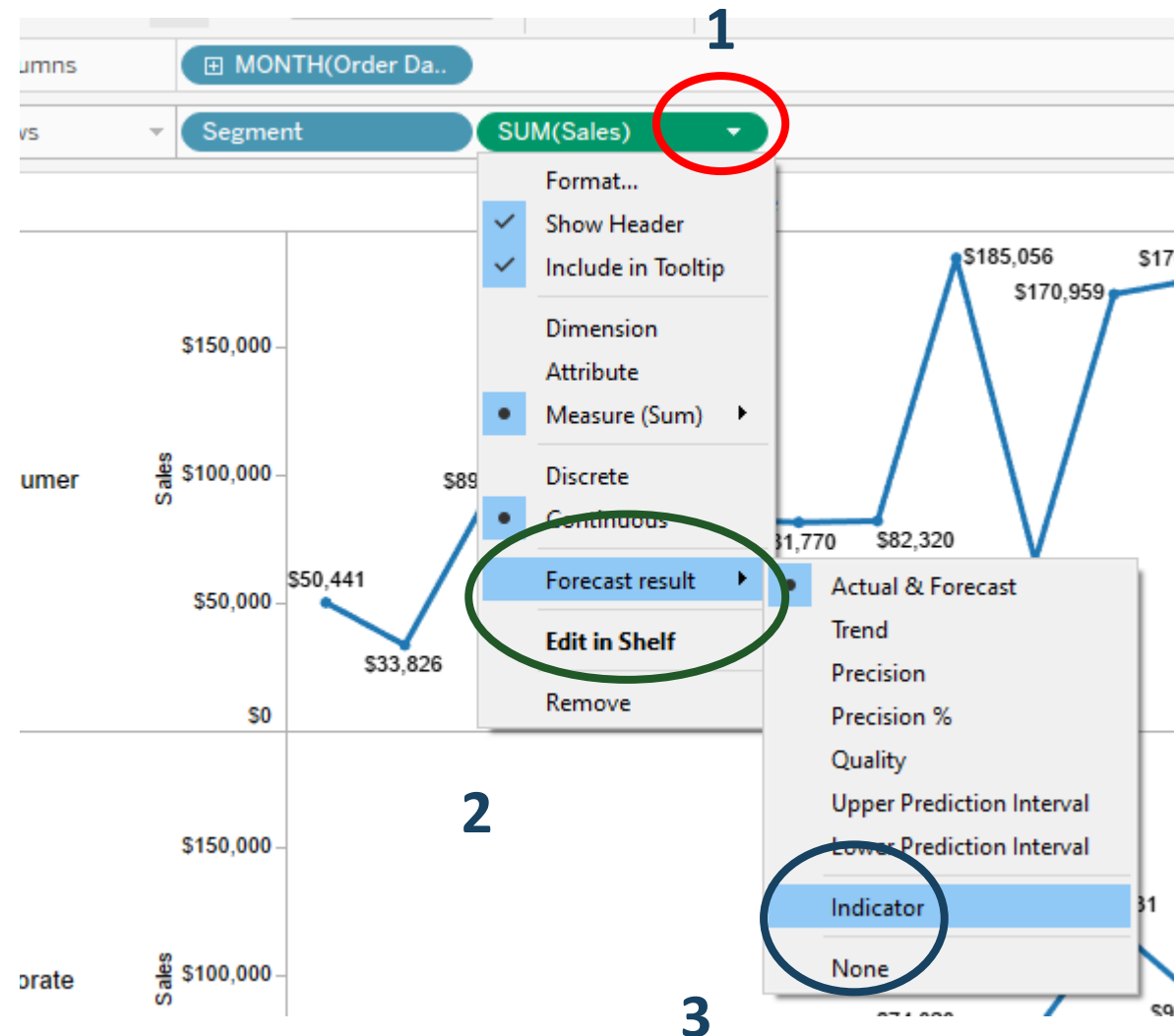


Tableau Business Intelligence Software

Case study



Forecasting – What-if analysis

Edit Parameter [New Business Growth] X

Name: Comment >>

Properties

Data type:

Current value:

Value when workbook opens:

Display format:

Allowable values: ☐ All ☐ List ☒ Range

Range of values

☒ Minimum: ☒ Fixed

☒ Maximum:

☒ Step size: ☐ When workbook opens

KPI: Business Growth Rate

Edit Parameter [Churn Rate] X

Name: Comment >>

Properties

Data type:

Current value:

Value when workbook opens:

Display format:

Allowable values: ☐ All ☐ List ☒ Range

Range of values

☒ Minimum: ☒ Fixed

☒ Maximum:

☒ Step size: ☐ When workbook opens

KPI: Churn Rate

Forecasting – What-if analysis

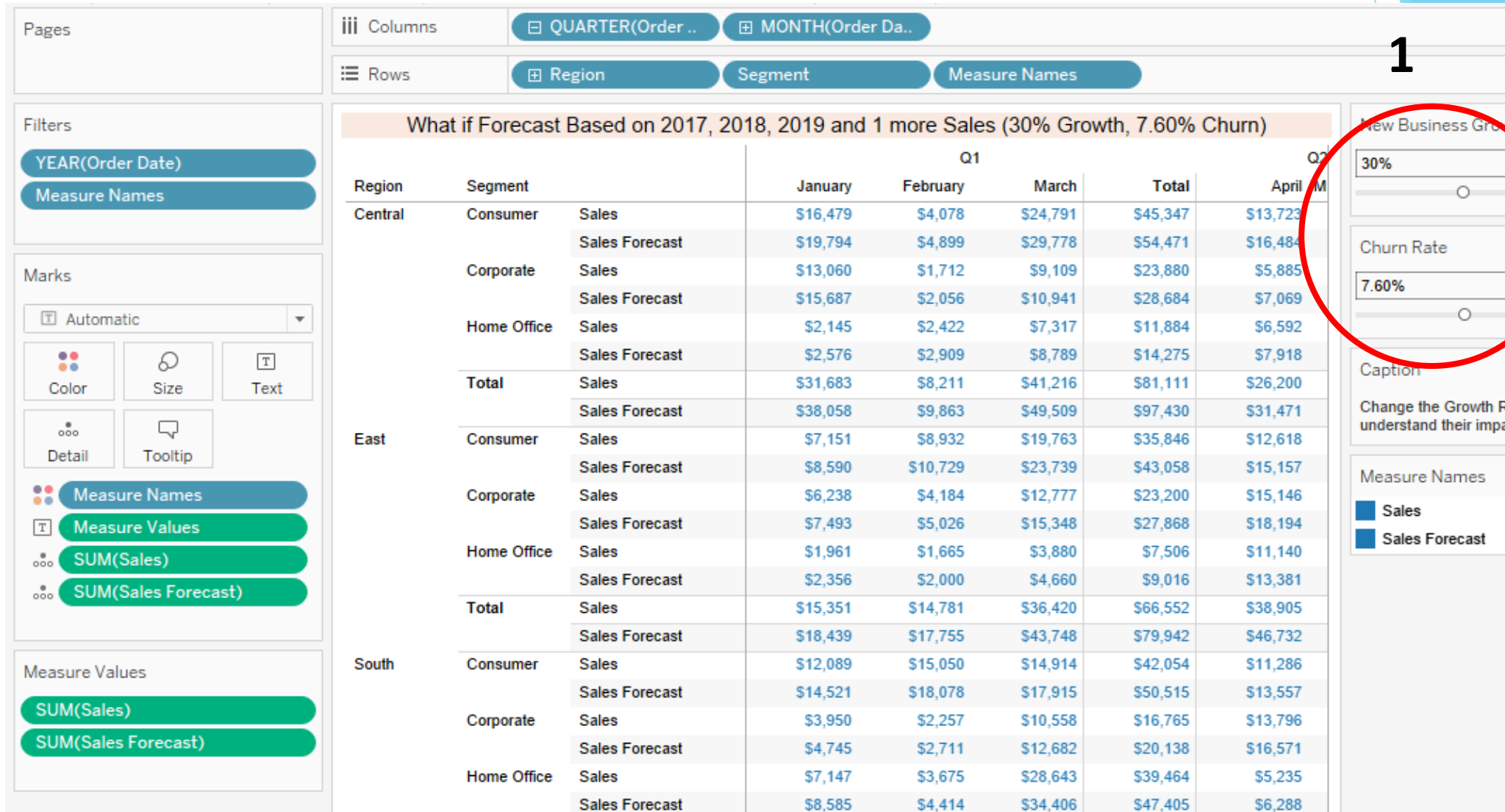
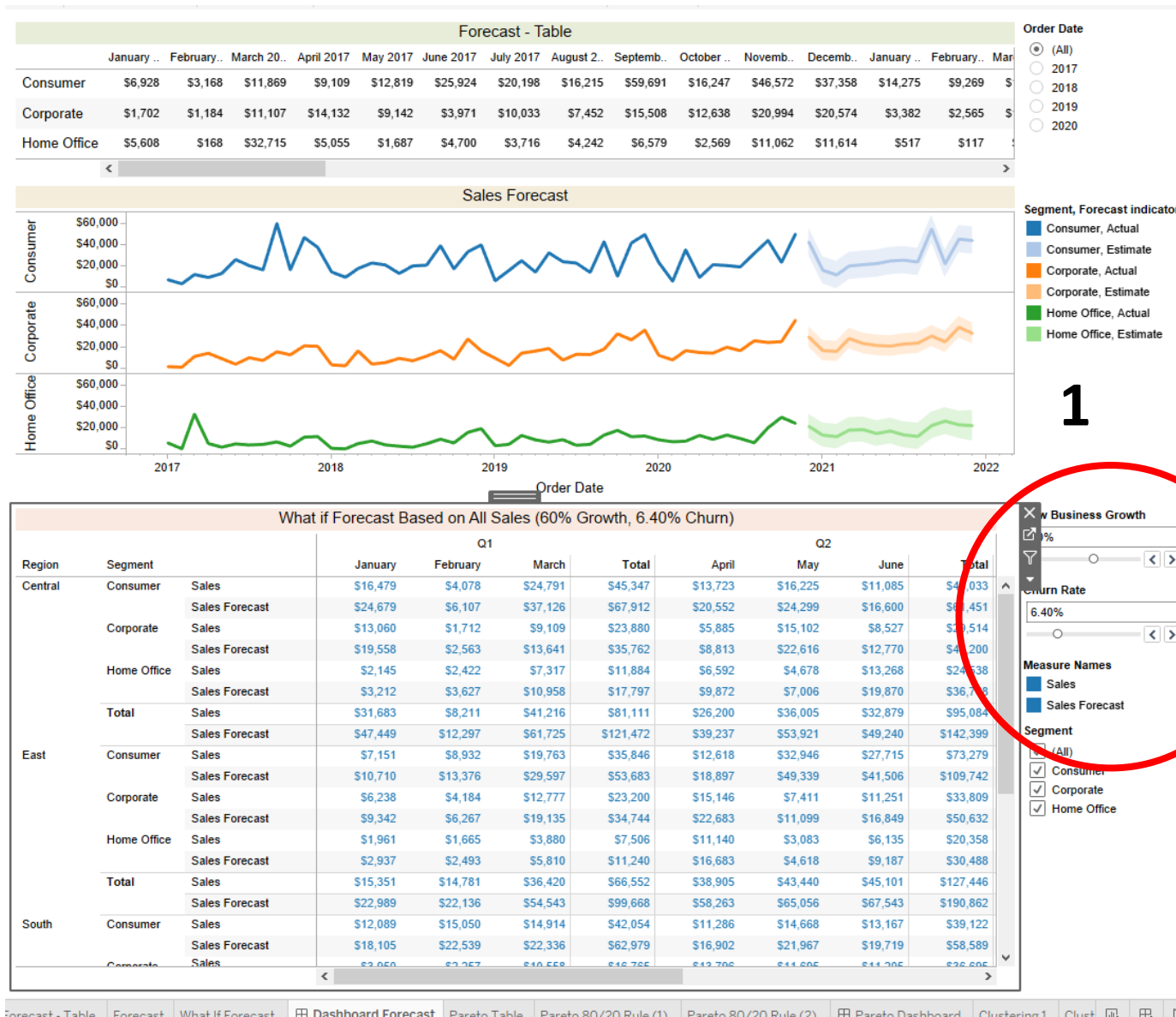


Tableau Business Intelligence Software Case study

Forecasting Dashboard



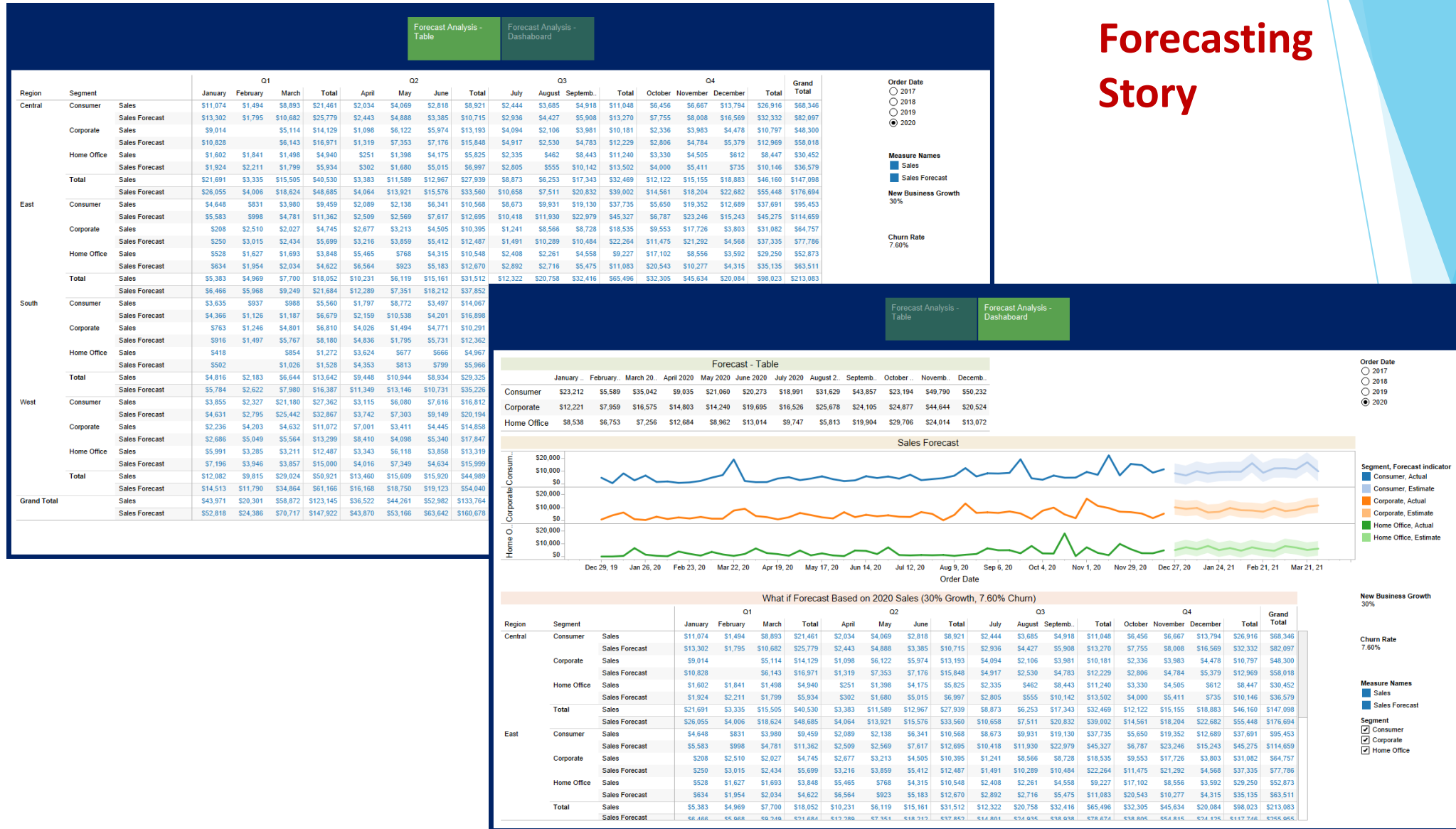
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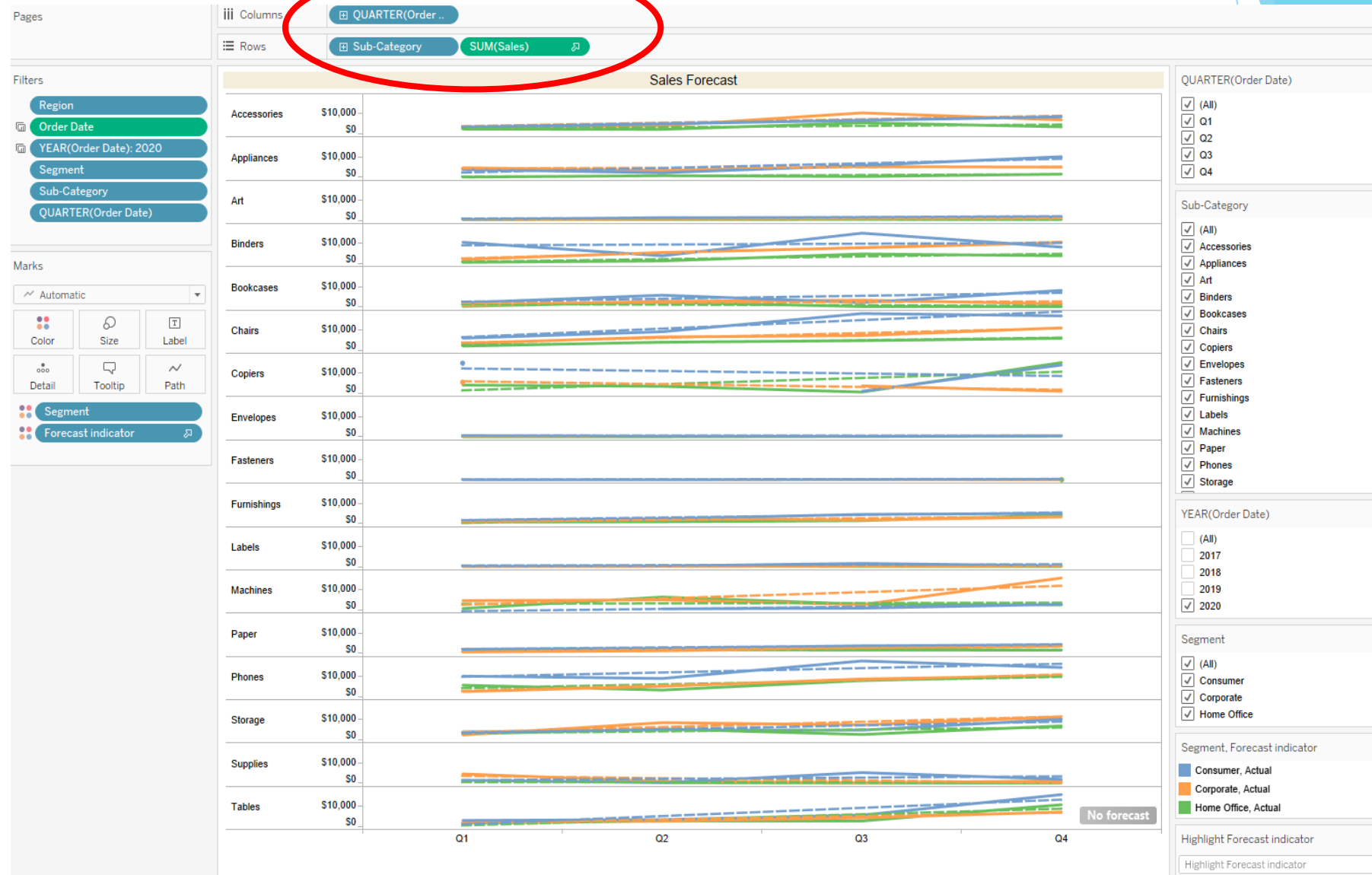
Case study

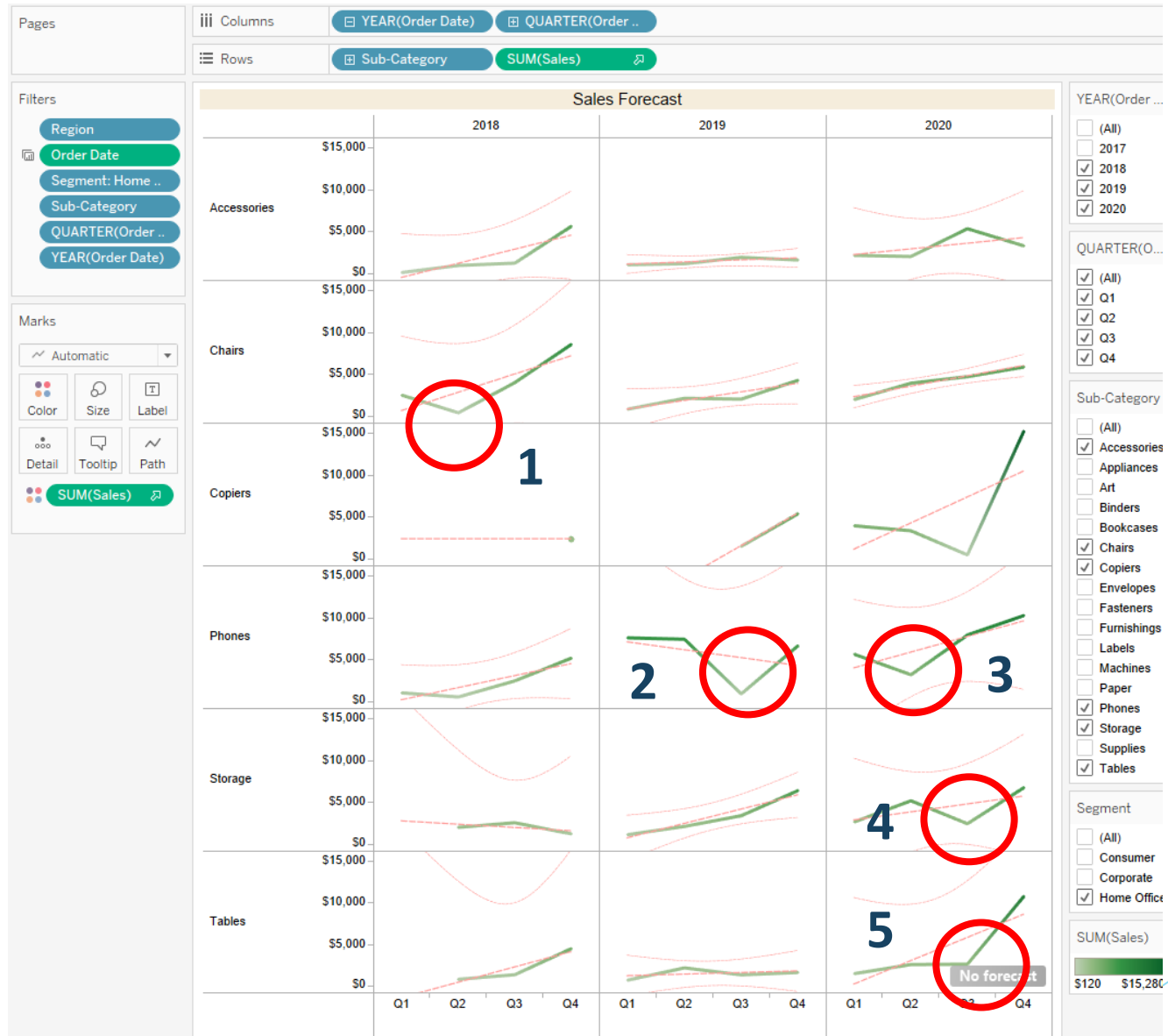


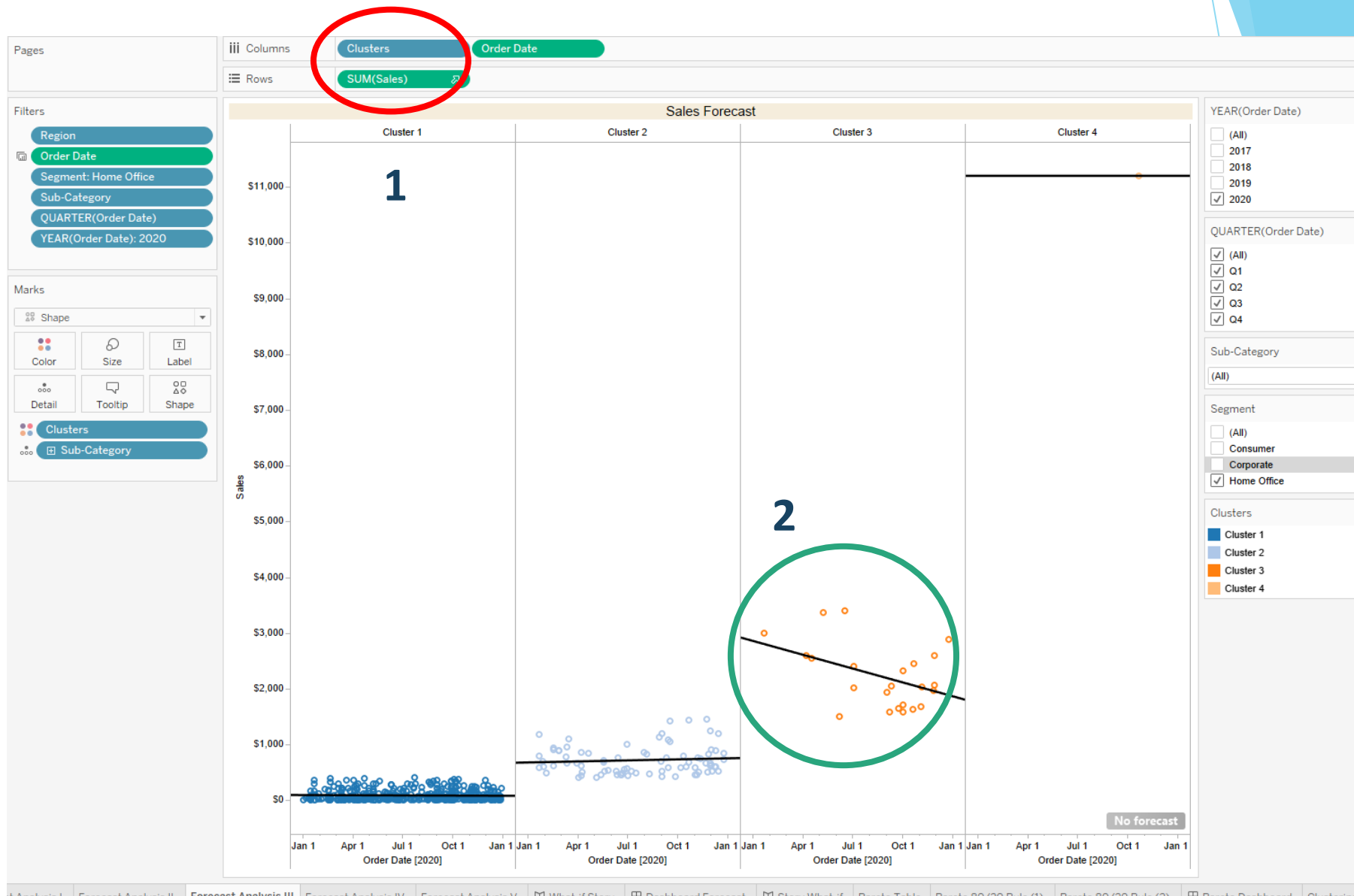
Forecasting Story



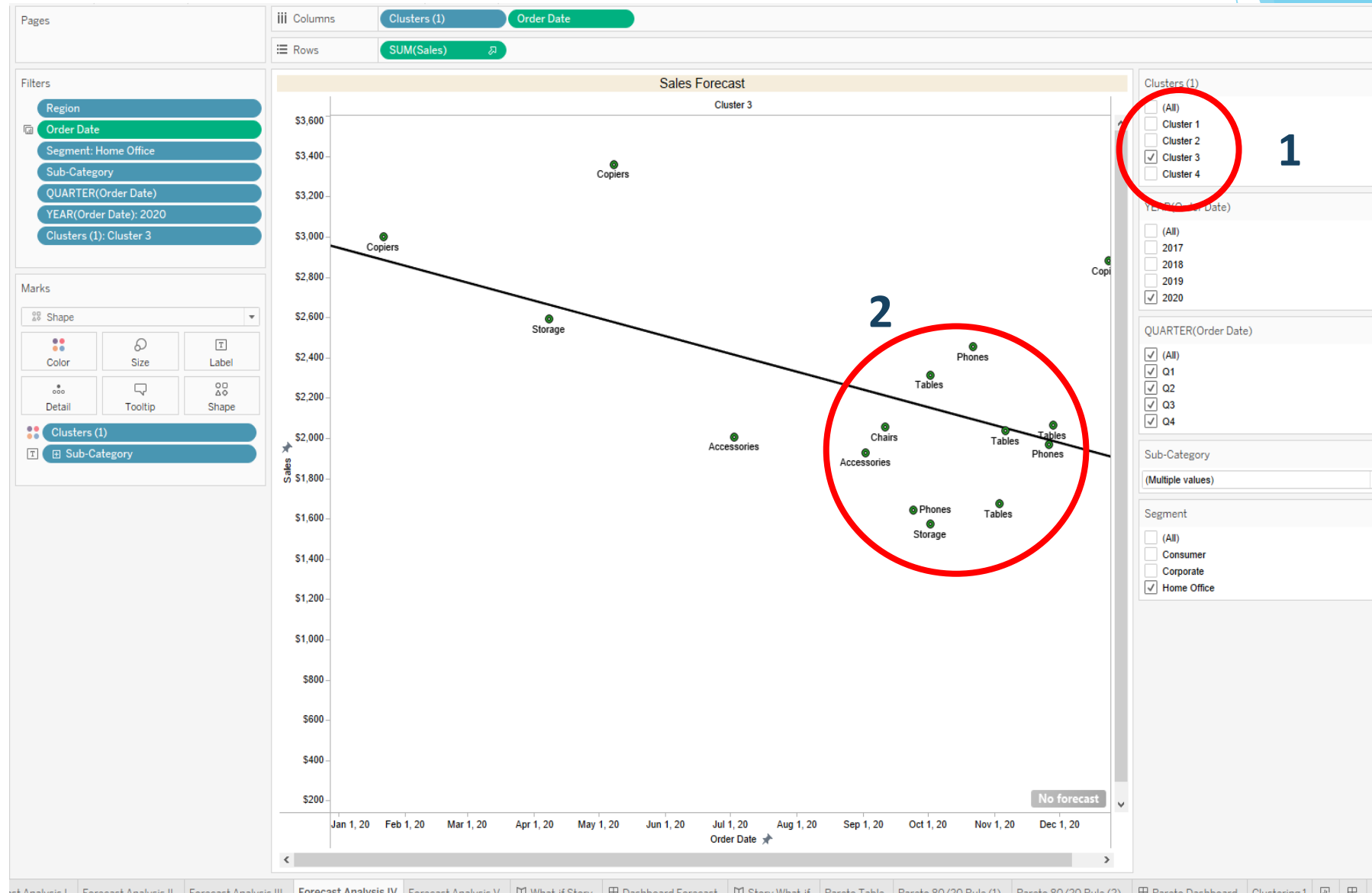
Forecasting Analysis



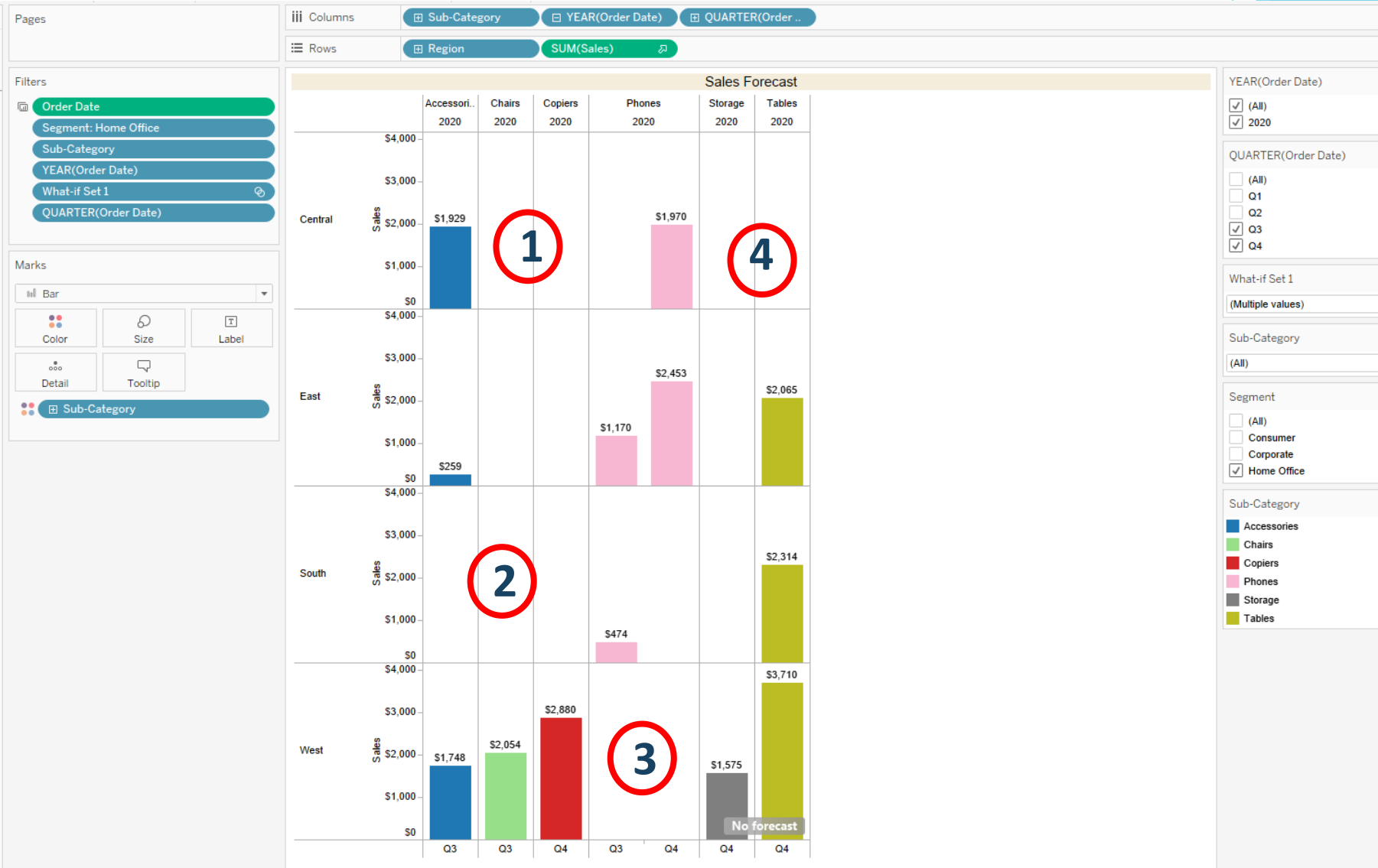




Forecasting Analysis



Forecasting Analysis



Sales Forecast

	Accessori..	Chairs	Copiers	Phones	Storage	Tables
	2020	2020	2020	2020	2020	2020
Central	\$1,929	1		\$1,970		4
East	\$259			\$1,170	\$2,453	\$2,065
South		2		\$474		\$2,314
West	\$1,748	\$2,054	\$2,880		\$1,575	\$3,710

Q3

Q3

Q4

Q3

Q4

Q4

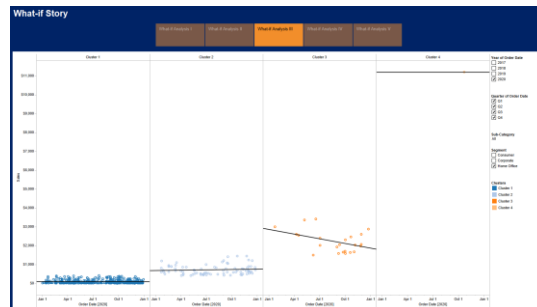
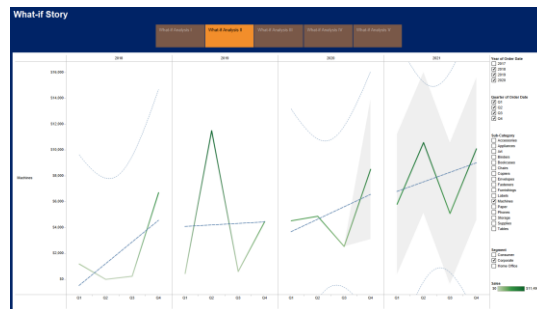
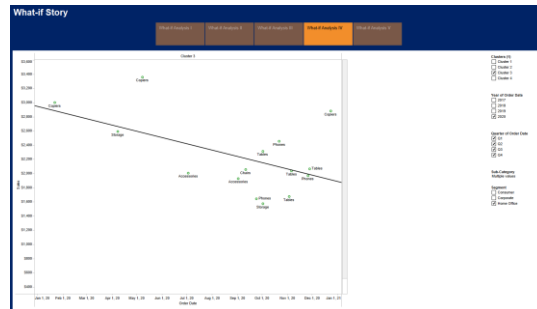
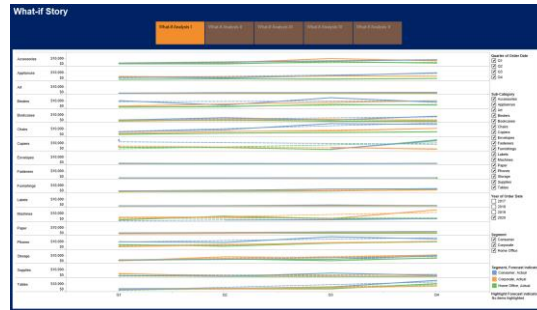
Q4

No forecast

21

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Forecasting Story Findings, Recommendations and call-to-action Best Practices



What-if Story

